



Attorney Docket No. 0756-1986

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Yasuhiko TAKEMURA

Serial No. 09/342,235

Filed: June 29, 1999

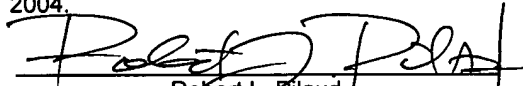
For: SEMICONDUCTOR DEVICE HAVING
AT LEAST FIRST AND SECOND
THIN FILM TRANSISTORS

) Group Art Unit: 2826

) Examiner: A. Sefer

) CERTIFICATE OF MAILING

) I hereby certify that this correspondence is
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) Commissioner for Patents, P.O. Box 1450,
) Alexandria, VA 22313-1450, on June 21,
) 2004.


Robert L. Pilaud

RESPONSE

Honorable Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Official Action mailed May 20, 2003 (Paper No. 27), and the Advisory Action mailed October 17, 2003 (Paper No. 20031010), have been received and their contents carefully noted. A Notice of Appeal was filed November 20, 2003, with a *Request for Three Month Extension of Time*. Filed concurrently herewith is a *Request for Five Month Extension of Time*, which extends the shortened statutory period for response to June 20, 2004. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on June 29, 1999, October 25, 2000, October 31, 2000, June 4, 2001, November 30, 2001, March 7, 2002, May 7, 2002, November 8, 2002, and February 24, 2003.

Claims 6-11 and 13-25 are pending in the present, of which claims 6, 9-11, 13, 16 and 20 are independent. The Applicant notes with appreciation the allowance of

claims 6-11 (page 3, Paper No. 27). For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action (page 2, *Id.*) rejects claims 13-25 as obvious based on the combination of U.S. Patent No. 5,051,570 to Tsujikawa et al. and U.S. Patent No. 5,302,966 to Stewart. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. For example, independent claims 13, 16 and 20 recite a wiring for electrically connecting one of a pair of impurity regions of a first semiconductor island which is a part of an NTFT with a second gate electrode formed over a second semiconductor island which is a part of a PTFT. Tsujikawa and Stewart,

either alone or in combination, do not teach or suggest at least the above-referenced features of the present invention.

Tsujikawa appears to teach active layers 114 and 115 in TFTs 103 and 104. However, Tsujikawa appears to be completely silent as to NTFTs and PTFTs. Also, Tsujikawa appears to be completely silent as to a wiring for connecting an impurity region of TFT 114 and a gate electrode of TFT 115. Further, the Official Action concedes that Tsujikawa does not teach a wiring connecting an impurity region of an island of an NTFT with a gate electrode of an island of a PTFT (page 3, Paper No. 27).

Stewart does not cure the deficiencies in Tsujikawa. The Official Action asserts that Stewart teaches "a wiring 332 connecting one of the impurity regions 226/330 of the NTFT first semiconductor island with the second gate electrode 206/334 of PTFT second semiconductor island" (Id.). Initially, it is noted that reference number 206 in Stewart refers to "a mask," so it is unclear what is meant by "second gate electrode 206/334." Further, it is noted that Figures 5a-5j, which include references 206 and 226, appear to be directed to a process for forming active matrix circuitry. Whereas, Figure 6, which includes references 330, 332 and 334, appears to be directed to an alternative embodiment which is independent from Figures 5a-5j. The specification of Stewart does not teach or suggest combining the device of Figures 5a-5j with the device of Figure 6. Therefore, it is unclear how the conductor 332 (allegedly the wiring of the present invention) of Figure 6 could be used with the N+-channel source/drain regions 226 or with a gate of a PTFT, presumably gate 216, of Figure 5. In other words, conductor 332 does not function with the device of Figures 5a-5j. In Figure 6, the conductor 332 appears to connect a drain region 330 with a gate 334. Figure 6 and the associated description in the specification appear to be silent as to NTFTs and PTFT.

Therefore, Tsujikawa and Stewart, either alone or in combination, do not teach or suggest a wiring for electrically connecting one of a pair of impurity regions of a first semiconductor island which is a part of an NTFT with a second gate electrode formed over a second semiconductor island which is a part of a PTFT. Since Tsujikawa and

Stewart do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Tsujikawa and Stewart or to combine reference teachings to achieve the claimed invention.

The Official Action appears to assert that since Stewart discloses an NTFT and a PTFT in Figures 5a-5j and a conductor 332 in an alternate embodiment in Figure 6, that one of skill in the art at the time of the invention would have been motivated to first combine the device of Figures 5a-5j and the device of Figure 6, and then adapt the hypothetical combined device to Tsujikawa in order to form a wiring for electrically connecting one of a pair of impurity regions of a first semiconductor island which is a part of an NTFT with a second gate electrode formed over a second semiconductor island which is a part of a PTFT. There is no motivation to suggest such a modification of Stewart and subsequent combination with Tsujikawa. It is unclear why one of skill in the art would have found any reason or desire to alter the teachings of Tsujikawa in such a fashion and it is respectfully submitted that such teaching is insufficient to maintain a *prima facie* case of obviousness.

The burden of showing sufficient motivation to combine references lies with the Office. MPEP § 2142 states "The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. ... The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention."

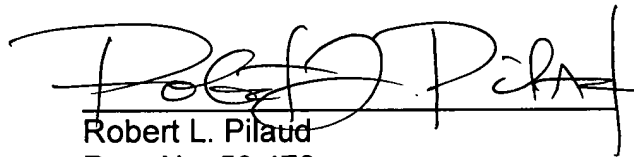
It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose

aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the present invention. MPEP § 2142 further states: "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. 'To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.' *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)."

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicant's undersigned at the telephone number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert L. Pilatid", written over a horizontal line.

Robert L. Pilatid
Reg. No. 53,470

Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, Virginia 20165
(571) 434-6789



PTO/SB/21 (08-00)

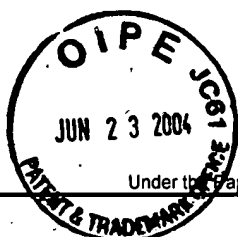
TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/342,235
	Filing Date	June 29, 1999
	First Named Inventor	Yasuhiko TAKEMURA
	Group Art Unit	2826
	Examiner Name	A. Sefer
Total Number of Pages in This Submission	Attorney Docket Number	0756-1986

ENCLOSURES (check all that apply)				
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Declaration and Power of Attorney <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosures 1. RCE 2. 3. 4. 5. 6.		
<table border="1"><tr><td>Remarks</td><td><input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 50-2280 for the above identified docket number.</td></tr></table>			Remarks	<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 50-2280 for the above identified docket number.
Remarks	<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 50-2280 for the above identified docket number.			

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Robert L. Pilaud, Reg. No. 53,470 Robinson Intellectual Property Law Office, P.C. PMB 955 21010 Southbank Street Potomac Falls, VA 20165
Signature	
Date	June 21, 2004

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Type or printed name	Robert L. Pilaud		
Signature		Date	June 21, 2004

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**FEE TRANSMITTAL
FOR FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant Claims small entity status. See 37 CFR 1.27.**TOTAL AMOUNT OF PAYMENT** (\$) 2,780**Complete if Known**

Application Number	09/342,235
Filing Date	June 29, 1999
First Named Inventor	Yasuhiko TAKEMURA
Examiner Name	A. Sefer
Group Art Unit	2826
Attorney Docket No.	0756-1986

METHOD OF PAYMENT

- 1.
- ☐
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

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50-2280Deposit Account Name
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- ☒
- Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 and credit overpayments

☐ Applicant claims small entity status. See 37 CFR 1.27

- 2.
- ☒
- Payment Enclosed:

☒ Check ☐ Credit Card ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)**2. EXTRA CLAIM FEES**

Total Claims	Extra Claims	Fee from below	Fee Paid
-20** =	X	\$18	
Independent Claims -3** =	X	\$86	
Multiple Dependent			

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent.

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
18051,840*	1805	1,840*		Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	465	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1005	Extension for reply within fifth month	2,010
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.29(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	770
1802	900	1802	900	Request for expedited examination of a design application	
Other fee (specify) _____					

* Reduced by Basic Filing Fee Paid **SUBTOTAL (3)** (\$) 2,780**CERTIFICATE OF MAILING**

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Robert L. Pilaud

SUBMITTED BY

Name (Print/Type) Robert L. Pilaud

Registration No. 53,470
(Attorney/Agent)**Complete (if applicable)**

Telephone (571) 434-6789

Signature

Date June 21, 2004